



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/670,522 | 09/26/2003 | Heung-Kyu Jang | 102-1005 | 6502 |

38209 7590 04/21/2005

STANZIONE & KIM, LLP
1740 N STREET, N.W., FIRST FLOOR
WASHINGTON, DC 20036

EXAMINER

FERGUSON, MARISSA L

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2854

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------|---------------------------------|--|
| Office Action Summary | Application No. 10/670,522 | Applicant(s) JANG, HEUNG-KYU | |
| | Examiner Marissa L. Ferguson | Art Unit 2854 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 1, 7-10, 12, 14 and 19-24 is/are rejected.
- 7) ☒ Claim(s) 2-6, 11 and 15-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki et al. (JP 04-140763) in view of Sato et al. (US Patent 6,574,011).

Regarding claim 1, Inagaki et al. teaches paper feed paths (38,68) along which a printing paper is fed, a main feed roller (34a) along which the printing paper is conveyed to the image forming unit (12) of the image forming apparatus and wherein a plurality of paper feeding paths are disposed along an outer circumference of the main feed roller (Figure 1) and wherein the paths are conveyed along a main conveyance path (24). However, he does not explicitly disclose a third paper feeding path and wherein the three feeding paths are disposed along an outer circumference of a main feed roller.

Sato et al. teaches an image forming apparatus that discloses a third feeding path (nonsort path 521, sort path 522 and a path located between rollers 502, 503) and wherein the feeding paths are disposed along the outer circumference of a feed roller

Art Unit: 2854

(505). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a third feed path and replace main feed roller wherein the feed paths are disposed along as taught by Sato et al., since Sato et al. teaches that it is advantageous to reduce paper jams in the in the printer.

Regarding claim 12, Inagaki et al. teaches a returning conveyance path (56) along which the printing paper is returned to provide double-sided printing.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki et al. (JP 04-140763) in view of Sato et al. (US 6,574,011) as applied to claim 1 above, further in view of Hashimoto et al. (US Patent 6,445,903).

Inagaki et al. and Sato et al. both teach the invention claimed with the exception of a pinch roller assisting the conveyance of the printing paper by rotating in tight contact with an outer circumference of the sub feed roller. Hashimoto et al. teaches a pinch roller (17a-c) assisting the conveyance of the printing paper by rotating in tight contact with an outer circumference of the sub feed roller (Figure 1).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention taught by Inagaki et al. to include at least one pinch roller in contact with the sub roller as taught by Hashimoto et al., since Hashimoto et al. teaches that such a modification would be beneficial for facilitating media movement.

4. Claims 8-10, 14 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki et al. (JP 04-140763) in view of Sato et al. (US 6,574,011) as

applied to claim 1 above, further in view of Takahasi et al. (US Patent 5,839,014).

Regarding claims 8 and 9, Inagaki et al. and Sato et al. both teach the invention claimed with the exception of a cassette conveyance path to guide the printing paper fed from at least two paper feeding cassettes and a tray conveyance path to guide the printing paper fed from a manual paper feeding tray. Takahashi et al. teaches an image forming apparatus comprising a cassette conveyance path (Figure 1) that guides printing paper from at least two paper-feeding cassettes (30) and a tray conveyance path that guides the paper fed from the manual feed tray (75b).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention taught by Inagaki et al. to include two cassettes and a manual feed tray as taught by Takahasi et al., since Takahasi et al. uses the cassettes and tray to provide a storage area for paper that is conveyed in the image apparatus.

Regarding claim 10, Inagaki et al. teaches a return conveyance path (56) along which the printing paper is returned to provide double-sided printing.

Regarding claims 14, 21 and 23, Inagaki et al. and Sato et al. both teach the invention claimed with the exception of a paper-feeding tray. Takahashi et al. teaches a paper-feeding tray (75b) that is used for storage. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to further modify the invention taught by Inagaki et al. to include a feeding tray as taught by Takahashi et al., since Takahashi et al. temporarily stacks the paper in order for the paper to be printed on both sides while conveying through the imaging apparatus.

Regarding claim 20, Inagaki et al. teaches a cassette conveyance path to guide the printing paper fed from at least one paper feeding cassette (36).

Regarding claims 22 and 24, Inagaki et al. teaches a return conveyance path (56) to guide along which the printing paper is returned to provide double-sided printing.

5. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inagaki et al. in view of Sato et al. and Takahashi et al. as applied to claim 14 above and further in view of Hashimoto et al.

Inagaki et al. and Sato et al. both teach the invention claimed with the exception of a pinch roller assisting the conveyance of the printing paper by rotating in tight contact with an outer circumference of the sub feed roller. Hashimoto et al. teaches a pinch roller (17a-c) assisting the conveyance of the printing paper by rotating in tight contact with an outer circumference of the sub feed roller (Figure 1). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Inagaki et al. to include at least one pinch roller in contact with the sub roller as taught by Hashimoto et al., since Hashimoto et al. teaches that such a modification would be beneficial for facilitating media movement.

Allowable Subject Matter

6. Claims 2-6, 11, 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claim 13 is allowed.

Reasons for Allowance

8. The following is an examiner's statement of reasons for allowance: Regarding claims 2-6, 13 and 15-18, the prior art does not teach or render obvious a connecting conveyance path formed between the main conveyance path and the outer circumference of the main feed roller to guide the printing paper, which is conveyed from the first, second, and third paper feeding paths along the outer circumference of the main feed roller, to the main conveyance path.

Regarding claim 11, the prior art does not teach or render obvious first and second sub paths having a first exit part disposed on a first portion of the outer circumference of the main feed roller to guide the printing paper fed from a first and a second paper feeding cassettes to the first portion of the outer circumference of the main feed roller and a third paper feeding path comprising a return conveyance path having the third exit part disposed on a third portion of the outer circumference of the main feed roller to guide the printing paper fed from a manual paper feeding tray to the third portion of the outer circumference of the main feed roller to provide double-sided printing.

Response to Arguments

Applicant's arguments filed 3/11/05 regarding the reasons for allowance have been fully considered but they are not persuasive. The reason for allowance does not

Art Unit: 2854

appear to narrow the scope of the claims and provides a clear interpretation of the claims. Therefore, the reason for allowance stands.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marissa L. Ferguson whose telephone number is (571) 272-2163. The examiner can normally be reached on (M-T) 6:30am-4:00pm and every other (F) 7:30am-4:00.

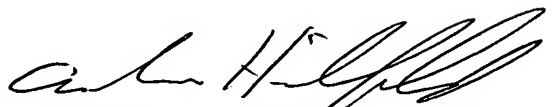
Art Unit: 2854

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marissa L Ferguson
Examiner
Art Unit 2854

MS


ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800